

ABSTRACT OF THE DISCLOSURE

A brushless dc motor includes a fan motor drive circuit, an over-current-detecting/current-limiting circuit and a multi-functional speed control circuit. The fan motor drive circuit is connected to the over-current-detecting/current-limiting circuit which is further connected to the multi-functional speed control circuit. The over-current-detecting/current-limiting circuit is adapted to detect a rotational speed and an over-current. Detecting an over-current, the over-current-detecting/current-limiting circuit controls a current at a low voltage level for passing through the fan motor drive circuit and inadequate to destroy it. The multi-functional speed control circuit sends a predetermined speed signal to control the over-current-detecting/current-limiting circuit for carrying out speed control of the brushless dc motor.